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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/692,225      | 10/23/2003  | Ramachandran Venkatesh | MSFT-2852/306819.01 | 8386             |

23377 7590 10/22/2004

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| EXAMINER |
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CORRIELUS, JEAN M

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2162

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/692,225

Applicant(s)

VENKATESH ET AL.

Examiner

Jean M Corrielus

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This office action is in response to the application filed on October 23, 2003, which claims 1-20 are presented for examination.

#### *Drawings*

2. Applicants are required to furnish the formal drawings in response this office action. No new matter may be introduced in the required drawing. Failure to timely submit a drawing will result in **ABANDONMENT** of the application.

3. Figure 2 should be designated by a legend such as --Prior Art-- because fig.2 is described in the background as a old illustration of art. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites "a database server that (i) receives a query on an object that is an

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instance of the user defined type, wherein execution of the query may require hydration of the object, (ii) accesses the information maintained by the database store to determine the storage of instances of the type.... (iv) structurally accesses the value without hydrating the object. It is not clear how the limitation (i) is related to the limitations (ii), (iii) and (iv) of the claim; and in limitation (iv), it is unclear as to whether the Applicant meant to say –the value of the field--. If the “the value” as recited in limitation (iv) is different than “ a value of a field of the type” there is a lack of antecedent basis in the claim. Either way, Applicant is advised to amend the claims to file the 112 paragraph set forth in the claim

6. Claim 1 recites the limitation "the definition type" in line 3. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination “the definition” is replace by –a definition of the object defined type—; and

Claim 2, recites “the method recited in claim 1, wherein the storage facets” in line 1. There is insufficient antecedent basis for this limitation in the claim because claim 2 is not further limited claim 1. There is no mentioned “storage facets” in claim 1.

Claim 11 recites “the database store” in line 9. There is insufficient antecedent basis for this limitation in the claim.

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Filepp et al., (hereinafter "Filepp") US Patent no. 6,199,100 and Gerald et al., (hereinafter "Gerald") US Patent no. 6,223,344.

As to claim 1, Gerald discloses the use of "defining a type of an object that can be persisted in the database store, wherein a definition of the object defined type comprises fields and behaviors" as a class of object which is a template that defines a type of object, wherein by defining a class of type of the object, objects can be created that belong to the class without having to rewrite the entire definition for each new object as it is created (col.4, lines 65-col.5, line 5). However, Gerald does not explicitly disclose the use of annotating the type definition with attributes that define the storage layout in the database store for instances of the type, wherein the database store uses the annotations in the type definition to control the storage layout of instances of the type in the database store. On the other hand, Filepp discloses the use "of annotating the type definition with attributes that define the storage layout in the database store for instances of the type, wherein the database store uses the annotations in the type definition to control the storage layout of instances of the type in the database store" as writing an explanation of type definition with attribute that defines the storage structure in the database (col.20, lines 9-65). It would have been obvious to one having ordinary skill in the art at the time the invention

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was made to combine the teachings of the cited references by incorporated the use of providing a writing explanation of the type definition with attribute that defines the storage structure in the memory location 120 of Gerald. One having ordinary skill in the art at the time the invention was made would have found it motivated to utilize such a combination for the purpose of supporting execution of the respective applications at the respective reception systems.

As to claim 2, Filepp discloses the claimed “annotating each field of the type with a first attribute that controls one or more storage facets of the field” (col.20, lines 9-65); and “annotating each behavior with a second attribute that denotes an equivalent structural access path” (col.20, lines 9-65).

As to claim 3, Filepp discloses the claimed “wherein the storage facets of the field that are controlled by the first attribute comprise at least one of the maximum size of the field, whether or not the field is fixed length, the precision of the field, the scale of the field, and whether values of the field can be null” (col.20, lines 9-65).

As to claim 4, Filepp discloses the claimed “wherein the second attribute specifies the name of a field of the type that is the subject of the behavior” (col.20, lines 9-65).

As to claim 5, Filepp discloses the claimed “wherein the object type is defined as a class in managed code” (col.20, lines 9-65).

***Allowable Subject Matter***

9. Claims 6-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Reasons for Indicating Allowable Subject Matter***

4. The following is an examiner's statement of reasons for allowance: Upon searching a variety of databases, the examiner respectfully submits that --translating the query into an equivalent structural access path for a value of a field of the type that is to be returned in response to the query, based on the information about the storage layout of instances of the type; and structurally accessing the value without hydrating the object-- in the system and computer program claims 6, 11 and 16 respectively, and in conjunction with all other limitations of the dependent and independent claims, are not taught nor suggested by the prior art of record (PTO-892).

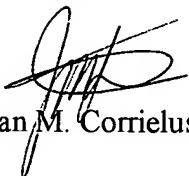
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for allowance."

*Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean M. Corrielus whose telephone number is (703) 306-3035. The examiner can normally be reached on Monday - Friday (12:00pm - 7:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jean M. Corrielus

Patent Examiner

October 19, 2004